

AVIATION

The Oldest American Aeronautical Magazine

SEPTEMBER 22, 1924

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President Coolidge receives elementary flying instruction while waiting for the World Fliers' arrival

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12

SPECIAL FEATURE

GENERAL REVIEW OF THE AMERICAN ROUND THE WORLD FLIGHT

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AVIATION

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THESE FOUR CARDINAL VIRTUES
HAVE NEVER BEFORE BEEN COMBINED TO SO GENEROUS AN EXTENT AS IN THE

BOEING PURSUIT

IN RECOGNITION OF THIS FACT THE UNITED STATES GOVERNMENT HAS INCLUDED A NUMBER
OF THESE PLANES IN ITS PRESENT BUILDING PROGRAM

BOEING AIRPLANE COMPANY
CONTRACTORS TO UNITED STATES GOVERNMENT
GEORGETOWN STATION, SEATTLE, WASH.



C. S. Avery flies a Standard Navy Seaplane off the deck of the U.S.A.T. *Yuma* during a training cruise.

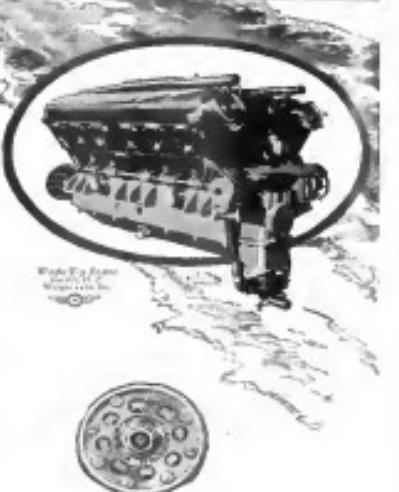
The *Yuma* is equipped with a Wright T-3 engine, recently made that gives 100 horsepower for engine weight of 120 pounds. It is built from sheet metal and weighs 1,000 pounds. It has a top speed of 100 miles per hour. (See page 11, top quarter column, left panel.)

The Tested, Steady Service of Wright T-3 Engines

OVER two years ago the Wright Model "T" Engine passed its experimental tests and is now the only high power aircraft engine in volume production in the United States.

With a record that includes various types of planes and unusual flying conditions, this Engine remains unexcelled for Durability, Low Frontal Resistance, Compactness, coupled with low weight per H. P., making it most useful for not only heavy duty and weight carrying, but for high performance planes as well.

WRIGHT AERONAUTICAL CORPORATION
Paterson, N. J., U. S. A.



WRIGHT T E N G I N E S

L. D. GARDNER, PRESIDENT
L. D. WILSON, SECRETARY
George Newbold, BUSINESS MANAGER

VOL. XVII

AVIATION

SEPTEMBER 22, 1924

Future World Flights

A HEADY consideration is being given to another Round the World Flight. The great success of the American press venture will probably lead to other attempts. Before this month the board of directors announced it will be well to consider some of the problems that are bound to arise in this connection.

For military or naval exploits of this nature will bring up a constitutional question that should be given serious consideration before hasty decisions are made. The mounting expense to our Army pilots by the countries over which they can or cannot proceed imposes obligations that may cause some discontent in the future if other flights are undertaken. Other countries, too, will realize the great advantages to be gained by having their flyers fly over foreign territory, especially a Chinese, an American or a Turkish flight were planned by military officials. Would the United States feel justified over assuming any of its transoceanic air routes to these others? For a passenger carrier, there are no reasons that we extended that will not be available when opened to the public as a means. A word of caution of the time is proper and will prevent unfortunate consequences.

In estimating what international routes could be secured, another question arises. Should the Navy or the Army prosecute these flights? The Navy is charged with all coast surveys and all military expeditions are planned. The Army is limited to coastal defense. The interests of both military and naval air forces over the sea in an uncharted world, with difficulties of opinion being expressed. The Navy, while properly has refrained from aerial contests on land. If the Army continues to extend its operations over the sea by air force flights, the differences of opinion as to the functions of the two services are bound to become wider still.

The general result that one can see from the Round the World flight which has aroused the imagination of the world is the establishing of an international around the world service and making renewed efforts to bridge any of the gaps that at present are not practicable for flight. If the air route from London to Tokyo had a regular service operated by international air fleet, there would be an increasing effort made to open the transoceanic routes a regular part of the route. The recent crossing of the Pacific and Atlantic have given conclusive proof that the Northern routes are an practicable for commercial uses. They also will put a damper on the difficulties and speculations regarding the transpolar route as an intercontinental air communication. All these factors are so good and further efforts are made to this end either to establish practical transoceanic routes there will be no objection from this great fact that will be as follows:

In conclusion, let there be a complete capitalization of the opportunities of the epoch making flight, but let it direct the advancement of commercial aviation

rather than for military development. And at the time when the 243 is expected to make the Atlantic voyage, it is important to consider the possibilities of making a start of an around the world survey, whatever both airlines and airships

Government Accepts McCook Field Site

PRESIDENT COHLEMAN has formally accepted the gift of a new site for McCook Field from the Dayton Air Service Committee which raised \$600,000 for this purpose. In the four thousand acres at the old farm where the Wright Brothers did their early experimental work.

Mr. F. E. Patterson, President of the National Aeronautic Association, on his return from Washington after presenting the site is quoted as saying:

"We have never performed a more grateful task. I have never been assigned a plainer duty than that which I have just performed in formally making this splendid gift to the nation on behalf of Dayton."

Mr. Patterson also pointed out that the field occupies by the Federal authorities of the new flying field carries a big impetus to the business of Dayton. It creates a large opportunity for permanent building and the establishment of a large force of skilled and unskilled labor. This will increase Dayton's population, raise many new houses to be built, and augment the business of the city's retail merchants. It will make possible many increased activities on the part of the experimental station, giving Dayton continuous worldwide publicity and attracting thousands of visitors.

General Patrick, in his 1921 Annual Report, called for five million dollars be appropriated before 1925 for the construction of the permanent buildings on the \$400,000 site. Dayton however at once acceded. Protective plans, linked with the proposed sale of the far abandoned air fields will aggregate a sum of \$10,000,000 for the purpose of erecting permanent buildings. The expenses made possible by the move will mean an annual profit of four \$2,000,000 to \$3,000,000 McCook Field can, has the fourth largest payroll in Dayton. It will give employment to 1,000 to 1,000 skilled workers."

He said under expansion will not be given to those places and departments it should be remembered that no permanent construction can be undertaken by the Army without the consent of Congress, that there is a Congressional investigating committee at work on the expenditures of the Air Service, that McCook Field will have to justify the expenditure since the War of \$200,000,000 with concurrent results commensurate with such vast outlay, and finally that the whole scope of the work of the engineering divisions of both Army and Navy will probably be reviewed by Congress before my permanent decision is passed. Should the government decide not to spend large sums on the new McCook Field the strong attachment to the gift which stipulates its use for specific purposes will make Dayton's loss or gain inconsequential.

LAWRENCE D'ORCY
VICTORIAN E. CLARK
RICHARD P. WHITING
RALPH H. CUNNINGHAM
EDWARD T. ALLEN
CONTRIBUTING EDITORS

No. 12



Brief History of the Round the World Flight

World Flies Covered 22,000 Miles from Seattle to Boston

In 153 Days, Using 300 Flying Hours

The pioneer flight around the world, organized by the Army Service with the assistance of the Navy and Coast Guard, was divided into ten divisions: (1) flight across the water flight from Japan to India, the overland flight from India to England, the crossing of the Atlantic and the last across the American continent. As will be noted, the route of the flight from Japan to India was selected for the crossing of the two great oceans for the benefit of the crew. The course however was made necessary by the limited range of the planes used. The overwater flight from Japan to India was undertaken on schedule, without difficulty or were the two overland divisions of the flight. In fact, it was the two examinations into the far north which caused the flight to fall behind their schedule. The time of the flight from Berlin to Boston was 153 days, a little over five months. During this time our world turned 11 times. The approximate distance would seem to be 22,000 miles. An approximate estimate would seem to be 153 days. An approximate estimate would seem to be 22,000 miles. The 153 days were spent mostly in stops and adjustments. The distance down from Seattle to Boston is approximately 22,000 miles, which was flown in more than 153 days at an average rate of speed of nearly 150 miles per hour.

Roster of Personnel

Following is the full roster of the personnel which comprised the round the world flight as it started:

FIVE PILOTS—Major Edward M. Martin, commanding officer; Major Frank C. Murphy, navigator; Major Alva L. Harvey, pilot; Captain (No. 2)—Pilot and flight commander after the Seattle's arrival in Alaska; Lt. Lowell H. Smith, mechanic and alternate pilot; Lt. Louis P. Arnold.

PILOT STAFF—Pilot, Lt. R. J. Leont, Lt. George W. Wedde, mechanic, Lt. E. L. Gorden.

Pilot New Orleans (No. 4)—Pilot and engineer officer, Lt. Col. Erik Nelson; mechanic and maintenance officer, Lt. Col. John Harding Jr.

Of these four ships, the Chicago and the New Orleans successfully completed the globe from Seattle to the Atlantic coast; the Boston was forced out of the Faroe Islands, and the crew remained the night at Frobisher Bay on a spare plane, the Boston having been unable to return to the ocean because of their splendid effort. The Seattle, the second ship, only reached Alaska, where it crossed 1020° e longitude at low visibility. The crew returned to the United States.

Crossing of the Pacific

The opening of the Pacific which had many before been accomplished was perhaps the most difficult part of the flight. Around the entire trip was flown through thick fog, with frequent sheet and snow storms which coated the planes with ice. At times great gales blew which held the planes up for weeks at a time. The flight from Seattle to Tokyo in the Chicago took 40 hours, which required 80 hr. of flying time, but the delayed time was 87 days, which put the flight a month behind schedule.

It was on this leg that Maj. Frederick Martin, leader of the expedition, was forced out. His first trouble was at Prince Rupert when he broke a strut on landing. At Portage Bay, Alaska, he was forced to land again, and his engine stalled and forced him down. The other three had gone ahead and it was not until the next day that the plane was found by the destroyers ship. After the motor in his plane had been changed Major Martin was held up several days by bad weather. When he finally set out, the weather was still bad enough so that he was forced into a mountain. After three days of hardships he found his companion Lt. Alvin Harvey found their way to a settlement.

The three other fliers, now under the leadership of Lt. Lowell Smith, continued by way of the Aleutian Islands.



Photo by G. R. Morris

The Round the World Flies with the Chief of Air Service—(L. to R.) Lt. Col. R. J. Leont, Lt. Col. John Harding, General Patrick, Lt. Col. Edward M. Martin, Lt. Col. Alvin L. Harvey, Lt. Col. Lowell H. Smith, Lt. Col. George W. Wedde, Lt. Col. E. L. Gorden, Lt. Col. Erik Nelson.

skirting the coast of Kamtschatka and reaching Japan by way of the Kurile Islands. It will be remembered that it was over the route of Kamtschatka that Major MacLaren, the British flier, was forced to give up his westward tour by reason of bad weather. The Americans fortunately had no forced landings or serious water trouble on this leg of the flight, but they were continually held back by the weather and their progress through at all was, really an extraordinary feat of navigation.

From Japan to India

On arrival at Yokohama, Ensign Lee, senior Tokyo, Japan, the Americans could have changed their engines and put on larger cylinders. New fuels were also available on the old ones had started to run out of water. The route followed to Calcutta, India was along the coast of China and Korea and across the Manchurian



Official Photo U. S. Navy (from Kain & Hartman)

The World Fleet: Art graphic of the American Cachet after they crossed the Atlantic ocean—for Tintib, Indian Harbor, Labrador, with Lt. Comdr. Smith and Nielsen's ships at anchor.

peninsula to the coast of Korea and so on to Calcutta. The distance of 4,600 miles was covered in 16 hr. 4 min. of flying time, while the elapsed time was 20 days. The flight was over periodically uncharted terrain because, naturally, no typhoon. The only point of reference was the sun and stars, which seemed able to lead them to measure the tilt of the audience. Navigation took the place of time and space. Lieutenant Smith had a forced landing with the Grumman off the coast of Japan by a water tank, and a new water tank had to be installed. He was soon forced down on Ternate, Indonesia, by another leak, and again put in a new water tank. During the Boston (Clouds, Length, Weather) pilot and New Orleans (Fuel, Erik Nielsen, pilot) both were forced down at Agincourt, Burma, a just destined onto one of the planes and damaged a wing.

India to England

On the October 1st, Wright claimed on the flight the Americans had traveled 10,000 miles and had made many flights, probably, unnecessary. They covered the states route in 46 min., but the elapsed time was only seventeen days. From Calcutta to Paris their time was fourteen days, of which three were spent changing motors at Karachi and one in Constantinople so that the Turks could inspect the machines. The Potez 30s then took 32 days to cover this distance. The Potez 30s, however, had a constant dash tank, twelve days, while the Americans, May 10, 1928, had a dash tank of 10 days. It was noted that on the duration which was flown with wind heading green, the American machine averaged low speed than that of the Japan-Japan division which was flown with positive. This shows the type of the head wind which they were forced to limit by leaving closer to fly westward.

All Calcutta area airports were poor, so new motors installed and the engine was taken off and sent to the Wright plant and one of India made this part. The first day from Calcutta, Nielsen in the New Orleans drove cracked cylinder though he was not forced down. However, it was decided to install new engines at Karachi after only 2,000 mi. of flight. All this leg of the trip was made over sea or land chartered aircrafts and of the landings were made at regular airfields from Karachi to Bangkok there made extraordinarily good landings represented no special difficulties. The landing though the fliers were only two miles behind those originally scheduled.

The Western Crossing of the Atlantic

The flight from England to America by the northern route presented great and unexpected difficulties. The American Flying Fleet which was to patrol the course had not expected the fliers to catch up on their schedule and there was a ten day delay in getting the planes into position. At the end of the first day the lead plane had gone and the others were given as delayed by the daily press, and the people of America took a new and more understanding interest in affairs connected. Nothing in recent years has done more to arouse public interest in promoting aviation and establishing airports than this great pioneering flight which has caught the imagination of the world. The fliers had turned their thoughts to the use of the biplane of the sky.

In returning the fliers to Washington, President Coolidge said "It is with a renewed faith in America that I welcome you. A new record of achievement has been made at the last on earth by you in the domain of aviation. It has been said by one who was the American nation. It has been said, still, your perseverance, your courage that has brought the world closer to understand. In what is probably the greatest opportunity for future scientific development of the portion your enterprise has made America rich."

that the appreciation of your contribution will be sufficient, so that on the field America always will be kept free."

A cable from the King of England read, "We truly heartily except in London our thanks and the other hearty congratulations on completion, for the first man to history, of the circling of the world by airplanes."

"I have followed with interest and admiration the progress of this heroic undertaking,"—General, R. E."

Governor Cox of Massachusetts, after welcoming the fliers and congratulating them on their exploit, and he hoped that the importance of aviation would be realized in the New England states and that every municipality would soon include a landing field.

President Coolidge, Woodrow Wilson, and Warren G. Harding were welcoming the fliers to New York and, "If our hospitality seems somewhat sparing we beg your pardon, it comes from the heart. You will find as you proceed along the home stretch that these receptions are the first evidence of the feeling that all Americans long to show you. The world never forgets its gallanthears. Those who brood the wilderness and cross the seas filled with dangers are never forgotten by posterity."

LOG OF THE ROUND THE WORLD FLIGHT

Date of Arrival	Mi. Hr. Min.	Date of Arrival	Mi. Hr. Min.
Start from Santa Monica, Cal., to		June 25 Ayakab, Burma,	445 4 30
March 17 Sacramento	370 4 32	June 26 Chittagong, India,	160 2 10
March 18 Eugene, Ore.	660 5 05	" Calcutta, India,	220 3 30
March 19 Vancouver, Wash.	130 1 30	July 1 Allahabad, India,	475 5 25
March 20 Seattle, Wash.	165 2 23	2 Umballa, India,	500 5 25
April 8 Prince Rupert, B.C.	810 6 10	July 3 Multan, India,	325 4 42
April 9 Sitka, Alaska	300 4 20	July 4 Karachi, India,	475 7 05
April 14 Seward, Alaska	810 7 48	July 7 Chabar, Persia,	330 5 55
April 16 Chigago, Afghanistan		" Sindar Abbas,	
Persia	450 8 45	Persia,	400 4 05
April 19 Dutch Harbor	400 7 20	July 8 Bushro, Persia,	200 4 07
May 3 Atka, Aleutian Archipelago		" Bagdad, Mesopotamia,	275 6 30
May 9 Attu Island	830 8 08	July 9 Aleppo, Turkey,	480 6 15
May 16 Kamtschatka, Kamchatka		July 10 Constantinople,	
Islands	400 5 39	Turkey,	690 7 40
May 17 Parashashin, Kurile Islands	627 6 35	July 12 Bucharest, Romania,	300 3 25
May 19 Hittakpan, Island of Tottorefa	590 7 15	July 13 Budapest, Hun-	
May 22 Minato, Japan	394 8 10	gary,	580 6 50
" Keusunagi, Ura, Japan		July 14 Vienna, Austria,	140 2 05
June 1 Kashimine, Japan	350 5 18	14 Strasbourg, France,	400 6 30
June 2 Kagoshima, Japan	350 8 10	15 Paris, France,	280 2 45
June 5 Shanghai, China	350 6 05	16 London, England,	225 3 00
June 7 Amoy, China	658 7 15	17 Brugge, England,	150 2 90
June 8 Hongkong, China	300 3 25	18 Kirkwall, Scotland,	400 6 30
June 10 Hsiping, French Indo-China	509 7 20	20 Hornsfiord, Iceland,	560 8 10
June 11 Tonraze, French Indo-China	398 6 28	Aug. 8 Reykjavik, Iceland,	350 4 55
June 16 Saigon, French Indo-China	530 7 35	Aug. 21 Frederiksdal, Green-	
June 18 Kawpong Island, Bangkok, Siam	340 4 10	Land,	625 9 55
" Bangkok, Siam	335 4 05	Aug. 24 Iringit, Greenland,	150 2 15
June 20 Tavoy, Malay		25 Indian Harbor,	
Peninsular	240 3 80	Lakehead,	572 6 30
" Rangoon, Burma	210 3 20	Sept. 2 Hawkes Bay, N. Z.	320 5 30
		Sept. 3 Picton, N. Z.	420 2 24
		Sept. 5 Cape Breton, Maine,	400 6 28
		Sept. 6 Beaufort, Mass.	129 6 03
		Total 23,377 mi. 313 hr. 7 min.	

Secretary of War Weeks, at a dinner given at Washington in honor of the world fliers, said in part: "Not only has the flight been successful, but it has been carried on in a way that reflects great credit on you and the United States Army, and your personal conduct has impressed the world, feeling strong between these nations which your planes have touched and our Government. I have had brought to my attention unanimous statement of the tact and great judgment with which you have handled your mission in extremely delicate situations."

The press has made a frequent criticism by American aviation as though the flight can be offset by hardly armament, says:

"The brief passage of the fliers in France gave us a little

appraisal of aviation in the United States and of the men whom God has endowed."

The airmen have been much about the world flight, and the newspaper throughout America have had extensive stories on their activities. Many have gone into the campaign to secure in the Congress of the U.S. the funds to expand the branch of the service. They have also urged the encouragement of civil aviation and the establishment of landing fields at those cities. The critics have given the fliers a hard time, as though the United States was the only part of the world where enthusiasm and enthusiasm which the fliers aroused. Presently will undoubtedly carry many interesting stories on the flight and the growth of "air standards" will be greatly encouraged.

Factors of Success in the World Flight

Equipment, Advance Organization and Cooperation

In my consideration of the factors which contributed to the success of the around the world flight the extraordinary qualities of the personnel must be given the first place. These men were great leaders, both in morale and real leadership; a soldier must sleep one hour each day, so after a night of sleep—and to plan an advance, were all needed by the fliers to the utmost degree. The lack of air of these qualities would have caused the failure of the flight. The Air Service is at a high quality, but the selection of the personnel for the flight was done with care and discretion. Whenever these qualities required their presence, the dullest and most uninteresting work was done with the greatest of enthusiasm, and the best of the troops were ready to dash ahead alone along the route, and it is this devotion to duty which made the flight possible. There can have been little in the temperament of staff and service to get the heads down, which is often typical of many others. Throughout the trip the fliers were to have created a favorable impression of efficiency, consideration on their task, and determination. A detailed biography of the fliers will appear in any issue of *Aero* 14, 1934.

It is of interest to note that both Lieutenant Smith and Lieutenant Nease were thirty, whereas Lieutenant Wedell was slightly younger. All three of the fliers had previously had over 3,000 hr. in the air, much of it on cross country flights.

The Douglas World Cruisers

The performance of the Douglas World Cruisers has been as smooth and perfect as to attract little attention. The planes have been out on the open seas for nearly four months. During this time they have undergone only minor trouble, due to the loss of an engine of the trooper out of the dive out of the desert, but from all accounts no trouble developed in any of the four planes which started. A single 17,000 pound propeller drove each and port and starboard housing were the only units trouble reported, and these were caused by undue strain in bad weather. The dropping of the wings on October 16, were of a protective nature, and were not a violation of the rules under the conditions which faced the world



See illustration

President Coolidge, surrounded by members of his Cabinet, greets the World Fliers upon their arrival at Flying Field, Washington, D. C.

It is indeed a tribute to the design and workmanship involved in the construction of the plane. Donald W. Douglas, the man who designed the flight right to fuel proved for the work which he has done and he deserves as little credit for his share in the success of the flight as anyone.

We Douglas was born in 1892. He went through the U. S. Naval Academy and the M.I.T., where he became an Assistant Professor of aerodynamics. During 1915 and 1916 he was test engineer with the Glenn Martin Co. In 1918 he joined the Naval Aviation Commission and with the Marine Corps, left in 1921 to return to the Martin Co., where he established a factory of his own. The original Douglas plane was developed for the Navy as a torpedo and bombing plane. It was so successful that it became the standard of the Navy for many years.

In 1924 the ship which we know now as the Boston, II was purchased by the Army and fitted by McCook Field as a land plane and at Langley Field as a seaplane. As a result of these tests it was decided to adopt the Douglas machine as World Cruiser and four more were ordered. Humpbacked and round the ears are the first things that impress one as looking at the machine. A more detailed inspection reveals many other features which are unique. The engine, for example, is a Pratt & Whitney, 400 h.p. The engine, with the exception of Major Martin's deep sleep, none of the planes had to have replacements due to engine trouble as much of the engine is in the unaccessible and flying qualities of the plane are to the ability of the pilot.

The detailed specifications of the Douglas plane were given in our issue of Feb. 25, 1933. The general characteristics

of the plane are as follows: weight empty, 3,000 lbs.; weight loaded, 2,615 lbs.; gas tank capacity, 400 lbs.; length, 40 ft.; wing span, 52 ft.; height, 12 ft.; development, a little over 400 h.p.; top speed of the machine was a little over 100 m.p.h. with a landing speed of 55 m.p.h. The average running speed on the trip was 74 m.p.h., but the actual air speed was probably around 80 m.p.h.

The Liberty Engine

Bengt Olson, engineer, was recently by the Rock Island Arsenal for use in the World Cruisers. The first Liberty of these were chosen for the flight and shipped to various parts of the world. On the basis of which they developed 418 b.h.p. which means a little better than 2 lb./hp.

These engines were fitted with modified cylinder heads having re-enforced bases, a pressure relief valve, improved main fuel system, improved water jacket system, a priming valve, the type of engine. A camshaft located was worked out so that they will be round after welding in the manufacturing plant. Each engine is assembled with some studs for mounting the eleven starting equipment location is furnished a driven system, which is a standard device without booster attachment. Fuel is supplied by a pump which is driven by the engine, a pump, however, is incorporated by one wind-driven pump as an auxiliary and is used while pump is fastest principally because of its ability to pass dirt, grit and other foreign substances without impeding its operation.

Engines (formerly Ryan) electric starters of the quadrant and type were used on all the Liberty engines in the American



J. A. Plana

The U. S. world cruiser, Nels Nelson's plane being loaded ashore at Ballyjames, Ireland. Left: Lt. Col. John Harding is hauling on the starboard float, while Lt. Col. Lowell Smith is steering inside the boat, directing operations.

LIGHT PLANES AND GLIDERS

Edited by Edmund T. Allen

The Rickenbacker Trophy

The National Aeromotor Association announces that the trophy for light planes, offered by Capt. E. V. Rickenbacker, will be presented for its second contests, the first of which will be held in connection with the Dayton Air Races.

The 1933 contest will be a cross country race for civilian-owned light planes equipped with engines of 60 cu. in. displacement or less. Several planes of this type will be ex-



The Rickenbacker Trophy for light planes

ited at the events of the International Air Races which are to be held Oct. 3 and 4, at Dayton, Ohio.

The first entry of entries in the 1932 Rickenbacker Trophy cross country race for light planes will start at Wilbur Wright Field on Oct. 6. The trials will take place on the city offering the greatest influence in the way of additional prize money. Trials are now being received from cities and Army Clubs located within a two hundred mile radius of Dayton. Fids with prints guarantee may be addressed to D. Russell Davis, 100 East Euclid Avenue, Dayton, Ohio, or they may be sent direct to the office and word be received as or before 8 p. m. Sept. 28, 1932.

The race course and territorial bidder will be announced later. Mr. Rickenbacker has offered \$5,000 in cash prizes in addition to gold, silver and bronze trophies to the winners of first, second and third place.

New German Light Plane

The pilot first at Manach, Bavaria, which during the past year produced some very efficient low-powered two-seat three-seater commercial airliners, has brought out a small single-seat light plane, named the Colibri.

The "Colibri" is a cantilever monoplane equipped with a 50 cu. in. Douglas engine which develops approximately a maximum of 24 hp. The wing is built in two parts and is



From Walter B. Hartman

New German glider, flying at the Berlin meet, piloted by W. Hartman. The simplicity of construction is noteworthy.

carried in panelled fashion by a number of one steel struts. The pilot's cockpit is situated under the wing. The fuselage is all wood covered, and has a side entrance door and a lower forward hatch.

The machine is said to be extremely easy and safe to fly and has been designed for simplicity of upkeep and ease of transport and storage. The wings can be taken down and folded against the fuselage, where they are held by suitable locking devices in two minutes by one man.

The machine recounts won the 5,000 mark prize of the Berliner Fliegerverein Society of Aeromotors for the first 2 hr. flight made by a German light plane.

SPECIFICATIONS OF THE UNTY COLIBRI

Span	Length	Height	Wing area	Max. speed	Altitude	Max. climb	Rate of climb	Wing loading
10 ft.	10 ft.	4 ft.	10 sq. ft.	70 mph	10,000 ft.	1,000 ft./min.	100 ft./sec.	100 lbs./sq. ft.
10 ft.	10 ft.	4 ft.	10 sq. ft.	70 mph	10,000 ft.	1,000 ft./min.	100 ft./sec.	100 lbs./sq. ft.
10 ft.	10 ft.	4 ft.	10 sq. ft.	70 mph	10,000 ft.	1,000 ft./min.	100 ft./sec.	100 lbs./sq. ft.
10 ft.	10 ft.	4 ft.	10 sq. ft.	70 mph	10,000 ft.	1,000 ft./min.	100 ft./sec.	100 lbs./sq. ft.

Gift to Sailplane Champion

Hermann Stoll, a wealthy furniture manufacturer of Tiefenbronn, Baden, a wealthy furniture manufacturer of Tiefenbronn, Baden, has presented to Ferdinand Schmitz, builder of the first ever sailplane, a record for gliding, a small sailplane built after the latter's specifications, the Stoll ship.

Schmitz' old glider, in which he remained in the air 5 hr. 45 min., was a home-made affair.

AIRPORTS AND AIRWAYS

Boston News

C. W. Hendon, Jr.

Major W. Hendon, en route back from the Brookfield Picnic, was carrying passengers at Broad Rock, when his auto stalled either going west or passed, and he stopped to help a half-spilt and crushed, unconscious slight injuries, as did his passenger, who, by the way, was loaded in his back yard. Two small glasses and a front window were badly damaged. His Jenny was pretty badly damaged.

Lat. H. C. Moffat, flying a PWS Canopus Pursuit ship east en route from Mitchell Field, N. Y., Tuesday, Aug. 26, in a stormy stage. He landed at Mitchell Field Monday from Bridgeport Field, Mich. The first landmark he recognized was New Haven, Conn. He landed there, and about quarter past six, helped off for the Airport, landing here at about midnight. His ship was given quite a test in the battle with the elements, but no circumstances showed any signs of accident. *

Three DHs dropped in Friday morning from Mitchell Field, N. Y., en route to Old Orchard, Me., where there was no aerial current. The ships are of the squadron of five twin-winged DHs that are coming up to escort the World Phala at Mitchell Field. They contained Lieutenant Colonel Pitts, Jason Macmillan and Lt. George Lawrence, brother of the designer of the Macmillan-Baird biplane. It took 2 hr 10 min. for the stage to reach Boston.

That same morning a DH came in from Mitchell Field at 1 hr 50 min., carrying Lieutenant MacDuffy. He had a complete photographic outfit in the rear seat. He hopped off unassisted, and was soon in time for breakfast.

Lieutenant Goldsmith came in Sunday afternoon about 5:30, from Belling Field, Washington, D. C. He made the return trip in the afternoon. He is here to act in the capacity of official photographer of the launching of the World Phala Squadron. *

Three ships went up to Old Orchard, Me., last Saturday afternoon, to take part in the American Cup competition. They were driven from New York by Capt. G. C. Coffey, A.C.O.D., a 24½ hours by Capt. E. W. Kilgore, with Louis H. Nagel as passenger, both Reserve men, and the PWS, flown by Lieut. E. C. Moffat.

The returned Sunday morning, Lieutenant Moffat making the safety add miles in 46 min.

St. Louis News

Lat. Day was celebrated at the Lambert-St. Louis Flying Field at Bridgeton with a reunion of aviators who served in the World War.

Although twenty or more planes, expected at the meet from other fields, failed to arrive, the visiting ships and their pilots were more than kind provided plenty of席席 for spectators. About 2 p. m. most of the visitors had eaten the performances of the bands.

About 3000 persons, including Adjt Gen. William A. Raap, witnessed the exhibition, which included a parabolic flight from a height of 10,000 ft., a spin of 2000 ft., two "dead stick" landings and numerous other acrobatics such as barrel rolls, loops and falling leaf descents from high altitude.

Probably the most dramatic exhibition of airplane maneuvering that gives by Fleet Cheesecake of Los Angeles as the first ever to be performed in the United States, was a performance of the Great Gatsby Circus, an acrobatic exhibition on the Western Front during the World War. After flying about 5000 ft. in a small Thomas-Morse sport plane, the pilot cut through a series of maneuvers that enabled the spectators and caused experienced fliers to gasp in admiration.

He executed barrel rolls and breath-taking turns with the grace of a dancer performing intricate steps on a ballroom floor, and then rose out of the sky in a "falling leaf." Another bit of fancy flying called "slipping," said to be of his own devising, was added to an encore. This comprised a series of gentle, violent, sideways movements resembling the strokes of a dancer.

Maj. William B. Robertson, president of the Balsam Aircraft Corp. of St. Louis, contributed a "dead stick" landing to the program. Flying a 4000 ft. he shut off his engine and then glided down in a spiral course and made a perfect landing.

Lat. Frank T. Davis, an amateur aviator, who served with the Canadian Expeditionary Forces, carried Major Robert E. Webster, for a distance, in a small handcart while flying. Flying a specially-constructed Canadian plane, he performed several loops, and then dropped about 2000 ft. in a spiraling spin, later shutting off his motor and landing with a dead stick.

A purrless leap by Capt. Ralph Douglass was the most when he left the spectator at a state of greatest excitement.

Sergeant Douglass, an amateur aviator, was flying his cockpit deck when he fell in his attempt to climb the rope upon which he was suspended from a plane. He was saved when the rope was cut above a hook, pinching him into the water.

Douglass landed from an altitude of 1800 ft. without injury although he was compelled to square vigorously to prevent hitting the top of the roof of a farmhouse at the corner of the field. The pilot, who was flying with the tail of the wind and dropped low to just past the "straps" depending upon the air current to carry him into the field. His legs were almost paralytic and he passed the farmhouse only by inches.

Spokane News

By E. M. Purpura

Ange efforts to have Spokane placed on a branch Air Mail route which would extend from Elko, Nev., on the main mail line to Spokane have been by Chamber of Commerce officials here. Postmaster T. J. Smith is working with them each day to get the mail to Spokane as quickly as possible and could be earned into Elko close together, and from both ends and could well be earned into Spokane with our trip.

After three months of barreling along, Pilot Nick B. Minard, 25, of Spokane, has a new record. He has been flying for a few weeks. He has been flying for all sorts of experiments to be ready for all cross country, photographs and some dispatch work available. He expects to equal his last year's record of 38,000 mi. of cross country work.

C. H. Messer, head of the U. S. Aircraft Corp. of Spokane, has one of the few complete stocks of Liberty motor parts in the West. Army and other firms have been invited to avail themselves of his service.

Air Mail Information

An announcement was made by Postmaster General New on Sept. 3 that notices sent by air mail may be forwarded to the addressee or returned to the sender by the same means when the delivery of the matter will be expedited if carried by air. No additional charge for postage will be made for notices or returns of notices in this manner except in cases where it is necessary to forward to a place beyond the limits of the post office which post office was used for the mailing of the notice. The carrier will receive payment for delivery of the notice by air from the point of original mailing to the office for final delivery.

Akron News

By Robert Morris

More than 50,000 Akron people witnessed the start of the annual "Fox and Hounds" contest from The Goodyear Field at Rubber City, athletes field on Lake Erie shore, which was won by the Akron team. The Akron team covered more than 30,000 m. in 11 hours. Goodyear spherical balloons joined in Goodyear fleet, and three officers of the United States Air Service.

The unusual race, the first of its kind held in Ohio and the second in America, was the major holiday activity in Akron, and the balloonists flocked to scaled maps and authentic objects exhibited when assembled in a world's record. The 100 bags were loaded within a half mile of the definitions.

W. E. Nathan W. Post, A.R., and Carl S. Wolke, who with W. T. Van Orman piloted the balloon "Goodyear 113" in first place, the 1933 National Elimination Race from San Antonio, Tex., then were recognized the first leg to arrive in the "Fox and Hounds" event. Having as their objective the first leg to Akron, Ohio, the Army officer and the Goodyear pilot arrived in balloon after their trip panel and a half mile from the given point.

W. T. Van Orman, retired Goodyear engineer and Lord Cycle Sales, A.R., who handled the second "Fox" in the race, came down on the Poland pull course near Youngstown, where he also beat a half mile from the point selected. The third leg was won by the members of the Akron team. John Hartman, of the Goodyear news staff and Leon Max F. Hayes, a R.A., who directed the course of the third balloon, officially handicapped by a long start were directly on the air route to their destination of East Fairfield, when decisions caused them to lead for the site of the preceding contests.

Ralph Upton and W. B. Scott, both of Detroit, served as referee and starter in the "Fox and Hounds" program.

Prizes for the last three contestants to arrive at the landing place of the balloon—were given by The Akron Journal.

The Commercial Aircraft Association, composed of plane owners and Akron men engaged in armament work, will meet with those engaged in commercial aviation at the time of the International Air Races in Dayton in October, it was announced.

The local armistice of which the late Lieut. Harold A. Kallberg was president and an engineer, began to extend the scope of its efforts and a working plan for a national organization.

Maj. H. A. Stinson, of the lighter-than-air division, Dayton, and Capt. G. B. Kremer, of McChord Field, Seattle, Wash., on a short vacation trip country, flying a T-34.

John C. Smith, of the Douglas Aircraft Co., was one of the passengers on the 211 during its first trial flight.

Yellow fin hens in Friedreichsberg for several months.

Harold F. Pitman of Philadelphia and James Ray of the Curtis Aerobatics Co. were in Akron for several hours on their tour of the United States.

New Orleans News

By Theodore M. Lewis

A new airplane was put into the air recently by the New Orleans Air Line, which took over the contract for carrying mail from New Orleans to Pilot Town from the Gulf Coast Air Line.

The ship took off at 2:30 to deliver mail to an isolated cluster of nests of the mouth of the Mississippi river.

The New Orleans Air Line of which Captain E. Danforth is general manager, has just completed a longer at the mouth of the Mississippi river. There is space for storing the ships, and for making repairs.

The company's three ships are Curtiss Seagulls, fitted with 150 hp. CI motors. All ships and motors are new stock. A quick service for deck lanterns is to be congratulated shortly, according to Mr. Danforth. As far as two lanterns will then be able to get from New Orleans to the "islands," where as by any other method the greater part of two days would be required.



Photo T. E. Lewis Service.

Art Plotnikoff, Captain, handling a sack of mail to John G. Endress, on the inaugural run of the New Orleans—Pilot Town service run by the New Orleans Air Line.

The first annual biplane of the New Orleans Model Aeroplane and Glider Club, which is located at 1101 St. Charles, at one of the local parks, had a large number of spectators interested. W. J. Robertson, aviator who was service in France, was the principal speaker of the meeting. His talk was enthusiastically received.

Several models, including Curtiss JN's, Republics and some amateur 201's were on exhibition. All models were made by the members.

The New Orleans Model Aeroplane and Glider Club is making arrangements to hold its first model contests, and the members of the organization are busy reconstructing sheds and tools model, in outfit in the various events. Business and the car have promised their cooperation in the way of prizes.

Hundreds of passengers were carried in New Orleans during the past two months by the ships of the Gulf Flying Corps. The ships started a census here a short time back and so intended were Orleanians in flying that the pilots decided to stay over a few weeks in order to take care of the ever-growing crowds.

Of the seven trips made by the ships, not one avoided disaster.

Pioneer Instrument Publicity

The Pioneer Instrument Co. of Brooklyn, N. Y., have recently retained H. A. Bruce & Associates as advertising representatives.

Among the Pioneer products to be exploited all over the world are the earth indicator compasses, the flight indicator and the aerial band group. These instruments were used successfully by our World War heroes.

French Balloons Grand Prize

The Grand Prize of the Aeron Club of France for five balloons, which had been held for the first time in its history outside of Paris, in Lyons, was won by the French pilot Cormier, with a distance of 260 m. Vercruy, the Belgian pilot, was second with 200 m., and Desnoyer, the third-place winner of the Grand Bennett Balkan Cup, was third.

Canadian Air Licenses

The July 30 session of the B.C.A.F. branch of the Department of National Defense of Canada showed that the 490 flight certificates and licenses in force were as follows: Private or pilot 2, commercial air plane 54, air regiments 23, registration of aircraft 35, airship licenses 33.

French Grand Prix for Transport Planes

This year's Grand Prix for Transport Planes, which was organized by the French Aero Society for Aviators with 400,000 francs in cash prizes, was held at Le Bourget Aug. 17-21. In addition, the Aero Club of France was granted 50,000 francs for experimentation purposes.

In general terms the competition was similar to that held last year. It was required to large capacity units to cover distances carrying a crew of three, sufficient fuel to



The Farman "Jules" (one 180 hp Hispano-Suiza engine) which for the second consecutive year won the French Air Transport Grand Prix competition for multi-engined cabin planes. Photo Illustrated and Cropped.

for 300 m. in an average head wind of 22 m./hr., and a maximum of 10 passengers contained in 220 cu. m. seats, which included three berths.

Yest the eve last year, there were only three entries, Farman, Blériot and Caubère, and these contestants entered practically the same stage as in the 1933 competition. Farman secured the "Jules" multi-engine monoplane equipped with four 180 hp Hispano-Suiza engines and Lorraine radiators which won the 1933 Grand Prix and which again proved the most reliable. The plane measures 62 ft. 10 in. span and 26 ft. in length and weighs 27,000 lb. empty and 31,450 lb. loaded. The wing area is 302 sq. m. The cabin accommodates 10 passengers.

The Blériot entry type 185 was selected with last year's design type 185 which had four 220 hp Hispano engines but had to take in place of the four 180 hp Hispano with which the previous year's entry was equipped.

Caubère entered the 231 model, fitted with three 250 hp Hispano engines, several of which are employed on the night flying service of the French Transavia Company between Berlin and Copenhagen.

In the qualifying trials the contestants had to describe in flight time figure-eight with each of the wings strapped to the fuselage and the plane losing any altitude. The time required for the first flight was 4 min. and 2 sec. and each of the judges must have started again in flight before landing. These data were selected for these trials.

The competition proper for the Grand Prix was then over the route Paris-Bordeaux-Paris, and competitors were required to cover the distance twice a day for three consecutive days. The journey from Paris to Bordeaux and back is approximately 460 m., so that in all the competitors had to fly a distance of 1,380 m. The award of the first prize of 200,000 francs and a second prize of 100,000 francs, was based upon a formula, according to which the machines were judged.

The formula was — in which F = useful load carried, T = speed attained, in km./hr., and H = the horsepower of the engine.

The Grand Prix commenced on Aug. 28 and finished on Aug. 31. The machines started from Biarritz, flew on to Bayonne, where there was a compulsory stop, and 400 m., and then returned to Biarritz. The Catalina, earlier mentioned, was fourth in the race with an average speed of 166 m./hr. and Biarritz 113 m./hr.

all three days, but as spite of this fact the two remaining machines made fairly good time. The Farman, piloted by Beaumont and Copet, and with Marcel Labeyre as mechanic, made the following speeds over the Paris-Bordeaux-Paris route—First day, 113 m./hr. Second day, 112.5 m./hr. Third day, 130 m./hr. The total load which did not exceed 10 passengers was 1,300 kg.

The Blériot 185 was piloted by Baust and Vélez-Malaga, with Captain Dugastre as navigator. The best flight was made at the average speed of 88.5 m./hr. Second day,

82.5 m./hr. Third day, 90.7 m./hr. The Blériot, with a greater engine power, was carrying 2,200 kg. useful load, and the lesser speed was against it, the more so as the square of the speed is used in the formula and a greater time placed the speed rather than on useful load per horsepower.

Projected International Air Service

Plans have been submitted for some time that Memphis, Tennessee, was to become one of the main bases of a new international air transport system. The most prominent reason behind this is the proximity of Peoria, Illinois, and French Lick, Indiana, in a French, Madison and French Lick, Indiana, designed to enter this field through the gateway of the upper and lower Midwest so as to interest the efforts of the German and English to expand toward the South and Southwest.

The first definite information available, from a reliable source, in the following article, was the signature of the Chief Engineer of Bridges and Roads of the Department of Roads, which recently appeared in *Engineering of Roads*, a publication of the American Society of Civil Engineers. Adriaen is now creating considerable publicity, the great international system which, based on the economy trunk London-Lyon-Marseille, will radiate from the last named city over Italy, the Orient and North Africa.

The capital station of Lyon (France), under construction, provided with wireless station, weather observatory, etc., will also serve as the police station for the proposed line Lyon-Geneva-Lausanne.

The King's Cup Race

The King's Cup Race, the annual British air classic, held Aug. 15, last was won by Alan Cobham on a DH89 passenger plane equipped with a 240 hp. Hispano-Puma engine. Norman Montague, on a Farman 300 short-distance 450 hp Hispano-Suiza, came in second place, and Alan S. Butler, also on a DH89, was third.

In previous years, the race was run open to seaplanes as well as landplanes. Martindale Heath was the starting point for landplanes, while seaplanes started from Frinton, the birthplace of the King's Cup race. From these two points the course lay by way of Little, Duxford and Fenstanton to Lakenheath, where landplanes and seaplanes landed. The total length of the course was approximately 600 m.

Cobham's flying time was 8 hr. 57 min., giving an average speed of 166 m./hr. Montague averaged 156 m./hr. and Butler 113 m./hr.

UNITED STATES AIR FORCES

U. S. ARMY AIR SERVICE

Distribution of A.S. Enlisted Men

The following distribution of the enlisted personnel of the Army Air Service, numbering 3,695, is of interest not only because it shows the number, type and location of the troops, but because it gives the names of the squadrons and other Army Air Service units.

The two tables preceding the number of men, refer to the type of troops, as indicated by D. Transient, C. Corps, A. Areas, GHQ; G. H. Q., GHQ; Overland, N.R.C. Special Service Schools, and F.P. Foreign Passengers.

Bell Field, Arkansas, D, 96; Photo Section, Observation Squadron (R. S.), D, 36; Motor Service Squadron, C, 372; 1st Photo Section, D, 25; Headquarters Detachment, GHQ, 60; total, 342.

Barks Field, San Antonio, Tex., Primary Flying School, 539; troops organized in 11th School Group, consisting of Headquarters, 11th School Group, 180; 5th School Squadron, 130; 4th School Squadron, 130; Motor Service Squadron, 125; total, 514.

Bottom Field, Fort Monroe, Calif., D, troops, Motor Observation Squadron, 277; Photo Section, 20; Motor Service for Supply, 5; total, 307.

Fort Bliss, El Paso, Tex., D, troops, 12th Observation Squadron (one Detachment at Fort Van Horn, Texas); 1, 06; 1st Photo Section, 49; 12th Air Intelligence Section, 5; total, 113.

Fort Brown, Brownsville, Tex., Detachment of 22nd Observation Squadron, 100; Motor Service Detachment, 100; total, 200.

Fort Sam Houston, San Antonio, Tex., 24th Photo Section, C, 20; Detachment from 12th Observation Squadron, D, 42; total, 62.

Kelly Field, San Antonio, Tex., Advanced Flying School, consisting of Headquarters, 4th Group, 25; 2nd Observation Squadron, 132; 3rd Observation Squadron, 132; 2nd Photo Squadron, 132; 4th Photo Squadron, 132; 4th School Squadron, 130; 4th School Squadron, 132; 4th Service Squadron, 170; 7th Photo Squadron, 132; 6th Service Squadron, 172; 2d Photo Section, 20; 3rd Photo Section, 20; 3rd Attack Squadron (R. S.), 96; 6th Service Squadron, 130; 1st Photo Section, 10; 6th Air Intelligence Section, 5; total, 630 total.

McKee Field, Beaumont, Tex., 2nd Wing, GHQ, troops, consisting of Headquarters, 2nd Bombardment Group, 250; 1st Bombardment Squadron, 132; 2nd Bombardment Squadron, 132; 3rd Bombardment Squadron, 132; 4th Bombardment Squadron, 132; 2nd Photo Squadron, 132; 3rd Photo Squadron, 132; 2nd Observation Squadron (R. S.), 96; 6th Service Squadron, 130; 6th Service Squadron (R. S.), 96; 5th Service Squadron, C, 36; total, 1,147.

McDonald Field, Beaumont, Tex., 2nd Wing, 6th Observation Squadron (R. S.), 96; 6th Photo Section, 30; total, 316.

McMurry Field, Montgomery, Ala., 23rd Observation Squadron (one Det. in Fort Bragg), D, 36; 4th Photo Section, D, 20; total, 114.

McWilliams Field, L. I., N. Y., 8th Observation Group, consisting of Headquarters, 8th Observation Group, A, 36; 1st Motor Service Squadron (R. S.) (transient), D, 30; 3rd Observa-

tion Squadron (R. S.) (transient), D, 30; 2d Photo Section (transient), D, 20; total, 432.

McKinley Field, Waco, Tex., 1st Observation Squadron (R. S.), 96; 2nd Observation Squadron, C, 20; total, 218.

McKissack Field, Fort Monmouth, N.J., GHQ troops, 46th Bombardment Squadron (one Det. 3rd Bombardment Squadron, F.W.), 132; Detachment of 20th Service Squadron (Det. from 2d Photo Section, Sep. 1); 4th Bomber Field, 90; 18th Airship Co (R. S.), total, 272.

McKissack Field, Fort McPherson, Ga., 1st Observation Squadron (R. S.), 96; 2nd Observation Squadron, C, 20; total, 218.

McKissack Field, Fort McPherson, Ga., 1st Observation Squadron (one Det. 3rd Bombardment Squadron, F.W.), 132; Detachment of 20th Airship Company, 132; 1st Airship Company, 130; 2d Airship Company, 130; 3d Airship Company, 130; 4th Airship Company, 130; 5th Airship Service Company, 180; 11th Photo Section, 20; total, 325.

McKissack Field, Waco, Tex., 1st Personnel Group, A, 36; 1st Personnel Squadron, 132; 2d Personnel Squadron, 132; 3rd Personnel Squadron, 132; 4th Personnel Squadron, 132; 5th Personnel Squadron, 132; total, 325.

McKissack Field, Waco, Tex., 1st Personnel Group, A, 36; 1st Personnel Squadron, 132; 2d Personnel Squadron, 132; 3rd Personnel Squadron, 132; 4th Personnel Squadron, 132; 5th Personnel Squadron, 132; total, 325.

McKissack Field, Waco, Tex., 1st Personnel Group, A, 36; 1st Personnel Squadron, 132; 2d Personnel Squadron, 132; 3rd Personnel Squadron, 132; 4th Personnel Squadron, 132; 5th Personnel Squadron, 132; total, 325.

McKissack Field, Waco, Tex., 1st Personnel Group, A, 36; 1st Personnel Squadron, 132; 2d Personnel Squadron, 132; 3rd Personnel Squadron, 132; 4th Personnel Squadron, 132; 5th Personnel Squadron, 132; total, 325.

McKissack Field, Waco, Tex., 1st Personnel Group, A, 36; 1st Personnel Squadron, 132; 2d Personnel Squadron, 132; 3rd Personnel Squadron, 132; 4th Personnel Squadron, 132; 5th Personnel Squadron, 132; total, 325.

McKissack Field, Waco, Tex., 1st Personnel Group, A, 36; 1st Personnel Squadron, 132; 2d Personnel Squadron, 132; 3rd Personnel Squadron, 132; 4th Personnel Squadron, 132; 5th Personnel Squadron, 132; total, 325.

McKissack Field, Waco, Tex., 1st Personnel Group, A, 36; 1st Personnel Squadron, 132; 2d Personnel Squadron, 132; 3rd Personnel Squadron, 132; 4th Personnel Squadron, 132; 5th Personnel Squadron, 132; total, 325.

McKissack Field, Waco, Tex., 1st Personnel Group, A, 36; 1st Personnel Squadron, 132; 2d Personnel Squadron, 132; 3rd Personnel Squadron, 132; 4th Personnel Squadron, 132; 5th Personnel Squadron, 132; total, 325.

McKissack Field, Waco, Tex., 1st Personnel Group, A, 36; 1st Personnel Squadron, 132; 2d Personnel Squadron, 132; 3rd Personnel Squadron, 132; 4th Personnel Squadron, 132; 5th Personnel Squadron, 132; total, 325.

McKissack Field, Waco, Tex., 1st Personnel Group, A, 36; 1st Personnel Squadron, 132; 2d Personnel Squadron, 132; 3rd Personnel Squadron, 132; 4th Personnel Squadron, 132; 5th Personnel Squadron, 132; total, 325.

September 23, 1924

AERONAUTICS

Airy Air Orders

First Lt. Philip Schaefferer, A.S., Kelly Field, to San Francisco, sailing on transport Jan. 3 for Hawaii.

Spec. Color 206 accorded to where Capt. Charles R. B. Dahl, A.S., and his crew have to proceed to Chancery Field.

Each of the following officers of A.S. On His Corps to receive duty as dates specified, reporting to Com. A. S. Fins, Pk. 1, 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 32nd, 33rd, 34th, 35th, 36th, 37th, 38th, 39th, 40th, 41st, 42nd, 43rd, 44th, 45th, 46th, 47th, 48th, 49th, 50th, 51st, 52nd, 53rd, 54th, 55th, 56th, 57th, 58th, 59th, 60th, 61st, 62nd, 63rd, 64th, 65th, 66th, 67th, 68th, 69th, 70th, 71st, 72nd, 73rd, 74th, 75th, 76th, 77th, 78th, 79th, 80th, 81st, 82nd, 83rd, 84th, 85th, 86th, 87th, 88th, 89th, 90th, 91st, 92nd, 93rd, 94th, 95th, 96th, 97th, 98th, 99th, 100th, 101st, 102nd, 103rd, 104th, 105th, 106th, 107th, 108th, 109th, 110th, 111th, 112th, 113th, 114th, 115th, 116th, 117th, 118th, 119th, 120th, 121st, 122nd, 123rd, 124th, 125th, 126th, 127th, 128th, 129th, 130th, 131st, 132nd, 133rd, 134th, 135th, 136th, 137th, 138th, 139th, 140th, 141st, 142nd, 143rd, 144th, 145th, 146th, 147th, 148th, 149th, 150th, 151st, 152nd, 153rd, 154th, 155th, 156th, 157th, 158th, 159th, 160th, 161st, 162nd, 163rd, 164th, 165th, 166th, 167th, 168th, 169th, 170th, 171st, 172nd, 173rd, 174th, 175th, 176th, 177th, 178th, 179th, 180th, 181st, 182nd, 183rd, 184th, 185th, 186th, 187th, 188th, 189th, 190th, 191st, 192nd, 193rd, 194th, 195th, 196th, 197th, 198th, 199th, 200th, 201st, 202nd, 203rd, 204th, 205th, 206th, 207th, 208th, 209th, 210th, 211st, 212nd, 213rd, 214th, 215th, 216th, 217th, 218th, 219th, 220th, 221st, 222nd, 223rd, 224th, 225th, 226th, 227th, 228th, 229th, 230th, 231st, 232nd, 233rd, 234th, 235th, 236th, 237th, 238th, 239th, 240th, 241st, 242nd, 243rd, 244th, 245th, 246th, 247th, 248th, 249th, 250th, 251st, 252nd, 253rd, 254th, 255th, 256th, 257th, 258th, 259th, 260th, 261st, 262nd, 263rd, 264th, 265th, 266th, 267th, 268th, 269th, 270th, 271st, 272nd, 273rd, 274th, 275th, 276th, 277th, 278th, 279th, 280th, 281st, 282nd, 283rd, 284th, 285th, 286th, 287th, 288th, 289th, 290th, 291st, 292nd, 293rd, 294th, 295th, 296th, 297th, 298th, 299th, 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BACKFIRES

The aircraft made at the engine were one that the plateau had been made of a certain place was a heavy ironed by heavy stone. We have been made by many readers with much interest and many writers the following present of the Associated Safety Code, Part II.

"Except in the case of appliances especially designed or otherwise arranged so that all appliances in service should be protected, when off from the sun and from rain and dust."

There was a time when Germany was the country where everybody learned about the possibility and the necessity of personal knowledge. But the public officials required in the States to indicate such engine plants as Chevrolet, Hispano-Suiza, Hispano-Suiza, and Fiat, and others, have now come to the same point. American in France as England—so far as we know for the German Heinkel aircraft plant where they work and could point them out as a step without a moment's hesitation.



CALIFORNIA

LOS ANGELES—The City of Los Angeles has issued its first license to the **RYAN SCHOOL OF AVIATION**. Other local flying schools will open soon. The new California State Department of Education has issued a circular to all state departments of education, asking them to issue flying and gliding courses in addition to a general plan.

CHICAGO

VARNEY FLYING SCHOOL
Established 1916
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Corporation established in 1916.
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101 South Main Street
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It was therefore with a considerable shock in our mentioned space that we noticed in a recent issue of "Illustrated Magazin" that Mr. Dan Polak, Zemba, was referred to as the "dearly beloved" Wallenberg, under whose roof he had been staying during his stay in America. "Illustrated Magazin" said: "We trust that Dan Polak will not possibly release Illustraz Avon being transferred into Germany."

Several cases of the last wrapping day dog, as recorded by one esteemed newspaper, "The New York Times," as an exclusive news item from Frankfort, Austria. "The steamer 'GROSSE' arrived from 32,000 colones and eight passengers with crew and crewmen.

No doubt the value entries were correctly paid to the ship.

Rising is an easy hazardous occupation, according to Dr. D. J. Kinsinger, a prominent life insurance man. His theories of safe and comfortable flying, however, include building, influencing, and inspiring the public to fly more safely.

Well, we are not boasting that Dr. Kinsinger did not include flying in the list of today's hazards. But what will our lights do if he should say? —Page R.H.U.

ONE WING LOW

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Planes Just...Gardens City, Corfu, N.Y. — Parts, Tools, Metal
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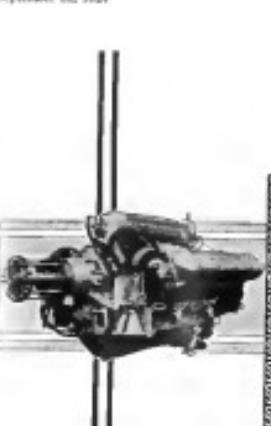
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RECORDS!

Speed: A Napier engined Gloster aeroplane is the holder of the British speed record 212.2 m.p.h.

Climb: A Napier engined Gloster aeroplane attained a height of 19,500 feet in the remarkable time of 11 mins. 34 secs.

Height: A Napier engined Fokker aeroplane achieved a World Record by climbing to a height of 21,276 ft. while carrying a load of 1102½ lbs.

For three years in succession the Aerial Derby has been won by a Gloster machine fitted with a 450 h.p. Napier engine.

1921 - 163.34 m.p.h.

1922 - 179.5 m.p.h.

1923 - 192.4 m.p.h.

In Royal Air Force, Commercial and Racing circles, the 450 h.p. Napier six engine has proved itself supreme.

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PUBLISHER'S NEWS LETTER

C. G. Grey, the brilliant editor of *The Aeroplane*, has accepted the invitation of AVIATION to come to this country and attend the Dayton Races, Meets and the Schneider Cup Race in Baltimore. His interesting comments on both aviation as well as his impressions of American aeroplane work will appear in AVIATION during his few weeks at this country. It will be a great privilege to have Mr. Grey join the staff of AVIATION and give his usual frank appraisals. This will be Mr. Grey's first visit to the country and his many friends will wish to make his stay pleasant.

* * *

Occasionally, there appears in every publication something that gives offence to a particular group. The New York Herald Tribune reserves a special place for the criticism of areas that are brought up in its columns. Several weeks ago there appeared in AVIATION in the form of a column a statement of one of these negative publications that was in effect exchanged by nearby cities. In the instance, Cleveland patrician Akron, and Akron, quite properly, rises in protest. Akron, the home of lighter-than-air development in this country for so many years has done much to encourage the airplane as well as its desire to have an air mail field is shared by nearly every other city in the country without this honor.

* * *

The intense interest or apathy at the smaller cities and the lethargy that is apparent in the larger centers may be due to the policy of the N.A.A. this year. Adelbert Feltner, who has been promoting the formation of chapters makes this policy clear when he writes: "The Executive Committee wisely decided that a large number of small chapters in many widely distributed cities would result in greater good to the cause and to the Association than a few big chapters in the principal cities of the country."

The smaller cities like El Dorado, Kan., Spokane, Wash., Battle Creek, Mich. and Mansfield, W. Va., that have paved the field are bringing a splendid contribution to the cause of

commercial aeronautics. Is that not a fact? The writer has found that little cities are more receptive and in many respects more patriotic than big cities. This is natural, perhaps. The smaller community is more easily stirred. It has a future to write out. We welcome the editor who writes a more practical scheme of government and production. The big city on the other hand, considers that it has solved all problems. It is a finished product. It is perfectly pleased with itself. As a result we find that chapters in some small cities are a hundredfold better per capita than in the large cities. If the latter were at initial interest as El Dorado and Spokane they would each have thousands of members instead of a corporal's guard in some cases."

Papers in Detroit, St. Louis, Boston, Chicago and other large cities that have taken a keen interest in aviation, but not in the N.A.A. please copy.

* * *

The development of a strong local interest in aviation has its dangers as well as its advantages. If the enthusiasm takes the form of creating a landing field and encouraging pilots, aircraft contractors and field operators the result is highly commendable. But just as soon as local eyes sweep the aeronautical horizon a different problem arises. Every city, naturally wants to be the center of all local radiating air mail routes. There is always the inclination of the air mail business to expand. And then when local interest is great enough it pushes its ambition to become one of the great airports of the world. All of which is most helpful and desirable from a local standpoint. Complications come when sectional aeronautical experts attempt to lay out the most practicable routes from the flying point of view. The population to be served should control the location of an air mail entrance as well as the practicable flying distance between cities. Aerial progress must be considered as a national problem whether viewed from a legislative or operative viewpoint.

A Suggested National Air Policy

That a National Aviation Policy is needed by the United States is obvious. To get such a policy in concrete form AVIATION requested several thoughtful friends of aeronautical progress to make suggestive and constructive recommendations. Some of them are given below and will be printed each week with additions, emendations and such other changes as appear to be helpful toward the formulation of a sound national air policy. Readers of AVIATION and others can render no greater service to the cause of aeronautical progress than contributing their comments and suggestions.

GOVERNMENTAL.

A continuing program of aeronautic development both governmental and commercial. A citizen, charged with championing a national air policy, is needed in the Government. "Callout Aircraft committee in the House and Senate to hold aircraft hearings where civilians as well as government officials can express their opinions." *Proposed of four.*

A detailed aeronautic budget for all Governmental Departments, and an annual statement of all expenditures. An experienced staff of flying officers at the head of all governmental air defense services.

Coordination of all procurement and experimental aircraft work of the government under one agency. "Co-ordination of the aircraft experimental development of the government testing procurement is the various branches themselves.

Limitation of government manufacture to repair of aircraft and specialized work that cannot be done by private firms. "No limitation on experimental construction.

The elimination of the duplication of aerial functions and facilities by government departments. A country wide Air Mail system of truck lines connecting the principal cities of the country. "Recreation funds for air mail planes.

Establishment of a National Airway System through cooperation of the Federal Government with States and Cities. "A landing field in every large city.

A national aircarft law that will regulate aviation, administered by practical pilots and experienced aeronautical engineers. "And federal air police.

Membership of the United States in the International Convention for Air Navigation.

"Increased governmental appropriations for aerial development.

"Encouragement of aviation rather than subsidy.

COMMERCIAL AIRCRAFT OPERATION.

Creation of commercial air law by private enterprise or government subsidy.

Encouragement of participation by private companies in aircraft races and competitions.

Encouragement of the training of pilots by civilian schools.

Creating an Expert de Corps among flying men all over the country by frequent gatherings of aviation meets.

"Encouragement of sale and race flying.

"A continuing organization, including representation of all important points of view in aeronautics, for the discussion of abstracts for aeronautics where standardization is desirable.

INDUSTRIAL AIRCRAFT CONSTRUCTION.

Recognition that a sound aeronautical industry is a prime necessity of our National Defense.

An active industrial association that will coordinate the aircraft industry and defend it from attack.

Encouragement of the designing of new types of aircraft by manufacturers by allowing them to retain their proprietary rights.

Concentration of manufacturing firms on specialized types of army and navy aircraft. "When production demands are heavy.

Encouragement of research by construction, universities and other agencies as well as by the government.

Encouragement of an annual design competition for commercial aircraft.

CIVILIAN.

A national aeronautical organization composed of public spirited citizens that will take a strong position of leadership on national aeronautical policy. "Organization of all aeronautical organizations into one national organization with chapters in all cities and states.

An Annual Aviation Week during which the country will think of aerial progress. "Hold such weekly.

The formation of local auto clubs by firms for the purpose of stimulating flying in all localities.

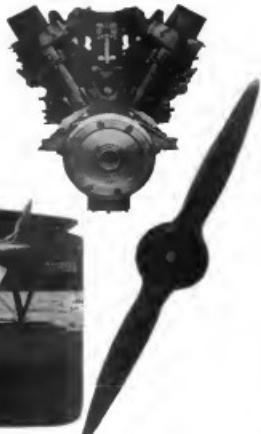
Encouraging the public to fly and patronize the air mail and transport facilities.

"The encouragement of gliding and soaring contests, especially intercollegiate.

"Suggested changes.

Curtiss

Speed with Safety



LIEUT. MAUGHAN SUCCEEDED WITH THIS COMBINATION

When the Army Air Service decided to demonstrate to the world the mobility of American aircraft, they chose a Curtiss product.

Lieutenant Maughan's recent flight from New York to San Francisco between the hours of dawn and dusk was accomplished in a Curtiss designed and built Pursuit plane equipped with a Curtiss D-12 motor and a Curtiss-Reed one-piece duralumin propeller.

This threefold combination is indeed hard to beat, as each one preeminently leads its field. The plane of Curtiss design includes all the essentials necessary for high speed racing and high performance military aircraft, among which are:

Extreme maneuverability with comfort and visibility to the pilot at all times;

Mulspar cellular wings, with covering of spruce plankings instead of fabric—shrapnel proof—no cloth covering to tear off;

Steel tubular fuselage with a readily detachable engine mounting;

Split axle type of landing chassis, in which shocks are

absorbed by rubber discs acting in compression. This chassis, although but a few months old, has already been adopted as the standard type.

Quickly detachable wing or cellular radiators eliminating resistance heretofore required for cooling;

Oil temperature regulator, which permits instantaneous starting, even in the coldest weather, and then maintains the proper temperature of the oil while in flight.

The Curtiss D-12 motor, in addition to holding all the speed records of the world, now has to its credit Lieutenant Maughan's achievement. On account of the small frontal area of the D-12 for the first time the size of the pilot rather than the engine controls the size of the fuselage.

The Curtiss-Reed one-piece duralumin propeller, the safest and most efficient propeller ever tested, is unaffected by hail or rain, tall grass, small particles, age or climatic conditions. It too has done its part in winning these high speed and endurance tests.

The Curtiss Pursuit as a fighting unit has no competitor in the world. It has set new standards for plane, motor, and propeller.

On September 3rd Lieutenant R. C. Moffatt flew from Boston to New York in 58 minutes!

CURTISS AEROPLANE & MOTOR COMPANY, Inc.
GARDEN CITY, L. I.

BUFFALO, N. Y.

